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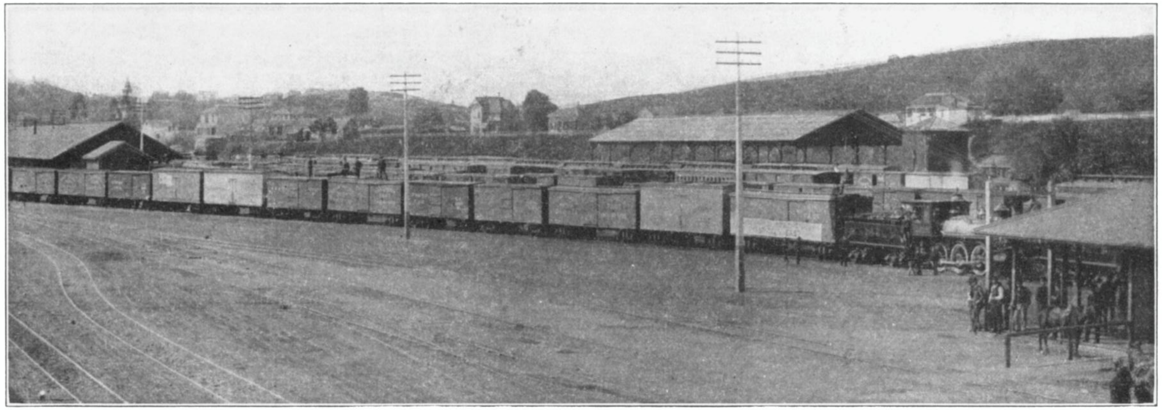

THE FIRST SPECIAL ORANGE TRAIN

Loaded exclusively with oranges. Left the River Station, Los Angeles, February 14, 1886, via the Southern Pacific and Union Pacific Railways. Through to the Missouri River on express train time. This view is taken looking south-west. Building on the left, ticket office and hotel; on the right the freight depot. This was the only railroad depot in Los Angeles in 1886.

FROM CATTLE RANGE TO ORANGE GROVE

BY J. M. GUINN,

Author of "The Passing of the Cattle Barons of California"

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During the first century after the settlement of California beginning with the rule of the Mission *padres,* and following them while under the domination of the cattle barons, the vast area of fertile land in the southern coast counties, stretching from the seashore back to the mountains, had been absorbed for cattle ranges and almost the sole occupation of its inhabitants was cattle-raising. The changed conditions of business in California under its new rulers after its conquest by the United States, and the "dry years" of 1863 and 1864, when the rainfall amounted to little more than a "trace" and cattle died of starvation by the hundred thousands, put an end to cattle rearing as the distinctive industry of Southern California, and brought financial ruin upon the cattle barons. The ancestral acres of many a proud Don passed into the possession of money-lenders.

The successors of the barons, who had obtained the great *ranchos* by foreclosure of mortgages or by purchase, soon found that they had not only one white elephant on their hands, but whole herds of them. What could they do with their new possessions to make them pay? It was useless to restock the ranges. The conditions that had caused the decline of the cattle industry still existed, and the elements that had wrought its final ruin might do so again.

It was evident that the industrial conditions of the southern counties must undergo a complete change. The great *ranchos* must be sub-divided and settlers encouraged to come to the country. The time for a transition of industries was opportune. The vanguard of that great army of home-seekers, that began its Westward march after the end of the Civil War, had reached Central California. The report of cheap lands in the South turned many of them in that direction. In 1868 and 1869 the rush for homes in the Southland was similar to a California gold rush of the early '50's. Every steamer down the coast was loaded with land buyers. A number of the great *ranchos* had been sublivided and were offered for sale in fractions to suit the purses of the purchasers at prices ranging from two dollars to ten dollars per acre on easy terms of payments.

The new home builders were mostly immigrants from the Western States and from Central California. Their agricultural experience had been confined to grain growing. The soil of their newly acquired farms was rich and easily cultivated. Wheat, on account of the fogs, was liable to rust; so barley became the staple crop. Where a few years before lowing herds had covered the plains, now fields of golden grain billowed in the breeze. The yield of grain was enormous but harvesting machinery was expensive and labor costly and of poor quality.

After harvest came the solution of the problem of transportation. The only market for grain then on the coast was San Francisco, five hundred miles away, and there were no railroads to it from the south. Los Angeles then was a city of vast area but of limited population and little commerce. A ton of barley would have demoralized its grain market for a month. The people pastured their horses on the sites of future skyscrapers, and kept dairies on Adams Street lots now built up with the palaces of millionaires. In the olden times cattle transported themselves to market, but grain sacks, had to be carried. The farmers, after their crops were marketed, found the lighterage charges, the freight charges, the commissions, drayage, storage and all other charges that commission merchants and middlemen could trump up, as cancerous as did the cattle barons the olden-time mortgages.

The producer was fortunate indeed if after his crop was sold he did not have to mortgage his farm to pay the deficit—actually to pay a penalty for farming his own land. It was clearly evident that grain growing for a limited market five hundred miles away would not pay. The all-important query of the agriculturists of the south was: what can we produce from which transportation charges and commissions will not take all the profits? Then began an era of agricultural experiments.

One of the first of these was the sericulture venture. Louis Prevost, an educated Frenchman, who was familiar with silk culture in France, in a series of letters in the newspapers, proved beyond a doubt that California was superior to France in the conditions required for the success of the silk industry—that the Golden State would eventually outrival France in silk production and put China out of the business.

To encourage silk culture in California, the Legislature, in 1867, passed an act giving a bounty of $250 for every plantation of 5,000 mulberry trees two years old, and one of $300 for every 100,000 merchantable cocoons produced. This greatly encouraged the planting of trees and the production of cocoons, if it did not add to the number of yards of silk in California. In 1869 it was estimated that in Central and Southern California there were ten million mulberry trees in various stages of growth. One nursery in San Gabriel—"The Home of the Silkworm," as its proprietor called it—advertised 700,000 trees and cuttings for sale. Two million trees were planted in and around Los Angeles City. Prevost had a plantation of fifty acres on South Main Street, and another in San Jose.

The *Los Angeles News* of April 11, 1869, says: "We risk nothing when we express the belief that in two years from this time the silk products of this county will amount to several million dollars."

The California Silk Center Association was formed with a large capital on paper. The association bought four thousand acres which now form part of the site of Riverside. It was the intention of the association to found a colony there of silk growers and silk weavers. Sixty families were reported ready to locate on the colony grounds as soon as negotiations were completed. Prevost, the great head center of the scheme, died shortly after the purchase was made, and the colony project died later. At first the profits from the seri-culture fad were large, not, however, from the manufacture of silk, but from the sale of silkworm eggs. When the industry was launched eggs sold at ten dollars an ounce and the worms were good layers. One seri-culturist reported a net profit of $1,000 an acre made in sixty days from the sale of eggs. Another realized $1,260 an acre in a single season. The net profits from his three acres of trees and cocoons exceeded the net profit on his neighbor's 10,000 acres of grain. With such immense returns from such small investments it is not strange that the seri-culture craze became epidemic. Mulberry plantations multiplied until the bounties paid threatened the state treasury with bankruptcy. A sanguine writer in the *Overland Monthly* of 1869 says: "It is almost startling to think that from a calling so apparently insignificant we may be able to realize in a short time a larger sum and infinitely greater gains than from one-half of all our other agricultural productions in the State." With the increased supply the price of eggs declined until it was all supply and no demand. Then the seri-culture epidemic came to as sudden a stop as yellowjack does when a killing frost nips the fever-breeding mosquito. The worms died of starvation and the bounty-bought mulberry plantations perished from neglect. Of the millions of trees that rustled their broad leaves in the breeze not even the fittest survived. They all died.

Out of the hundreds of thousands of bounty-bought cocoons only one piece of silk to my knowledge was manufactured, and that was a flag for the State Capitol. Financially considered (not sentimentally) that was the *dearest* flag ever unfurled. Counting bounties paid and labor lost on a nonproducing industry, indirectly that flag cost the people of the commonwealth not less than a quarter of a million dollars.

The experiment failed, but not because California was unsuited to silk culture. The defects were in the seri-culturists, not in the soil or climate of the State. There was no concert of action among the producers. They were scattered from Dan to Bersheba, or what was a much greater distance, from Siskiyou to San Diego. There were not enough producers in any one place to build a factory, and not enough weavers in the country to manufacture the raw silk produced; nor could capital be induced to invest in silk factories.

Another agricultural experiment which promised good returns but resulted in failure was cotton growing. A number of experiments on a small scale made at different times and in different places in the State, had proved that cotton could be grown in California equal in quality to the finest Sea Island and Tennessee Upland of the Southern States, but no attempt had been made to produce it in quantity.

The Civil War had demoralized the cotton industry in the South and sent the price of raw material booming. The Legislature of California, to encourage cotton growing, offered a premium for a certain number of the best bales produced. About 1866 or '67 Don Mateo Keller, an old resident of Los Angeles, tried the experiment of growing cotton on irrigated lands. Eighty acres of land lying north of Jefferson Street and west of Figueroa, now covered with fine residences, was planted in cotton. The plants grew luxuriantly and produced abundantly. The bursting bolls whitened the field like the snows of winter an Arctic landscape. Enthusiastic agriculturists rejoiced over the advent of a new industry and prophesied that cotton would be "King" in California. Don Mateo built a gin and ginned a number of bales that took the premium, but the profits from his venture were not sufficient to induce him to become a cotton planter.

Colonel J. L. Strong, a cotton planter from Tennessee, in 1870 secured from the Los Angeles & San Bernardino Land Company a lease of 600 acres located on the Santa Ana River in the Gospel Swamp country, a region famous in early times for mammoth pumpkins and monster camp-meetings. On this he planted a large field of cotton. It grew like the fabled green bay tree, and produced fabulous returns, but not in money. On the Merced River bottoms near Snellings was a plantation of a thousand acres and in Fresno County were a number of smaller ones, aggregating about 500 acres. The California Cotton Growers & Manufacturers' Association purchased ten thousand acres of land adjoining to, and covering part of the present site of Bakersfield, the oil metropolis of Kern County. On account of the difficulty of obtaining seed only 300 acres were planted the first year. A portion of this made a fine crop of excellent quality. The association announced that it would plant 2,000 acres next year; and to encourage planting would furnish growers with seed and gin their cotton free. To secure laborers, the members of the association imported a colony of negro cottonfield laborers from the South, built cabins for them and hired them to plant, cultivate, pick and gin the prospective crop. The colored persons discovered that they could get much better wages at other employments and deserted their employers. The cotton crop went to grass and the cotton growers went into bankruptcy.

The experiments tried in various parts of the State demonstrated beyond a doubt that cotton of the finest quality could be grown in California, but when it came to figuring profits in the business—"that was another story." The negro cotton-picker was not much in evidence here and those that were, were too "toney" to stoop to cotton picking in California. The Mexican peon and the Mission neophyte could pick grapes, but when it came to cotton picking they simply bucked and that was the limit with them. White labor was too scarce and too expensive. So the coast winds did most of the picking. For that which was gathered and baled there was no market nearer than Lowell or Liverpool—18,000 miles away via Cape Horn. There were no railroads then in Southern California, and no cotton factories on the Pacific Coast; so the cotton boll like the silk cocoon, disappeared from the land of the afternoon.

The next industry that came to the front guaranteed to lift the agriculturist out of the slough of financial despond, was the cultivation of the castor-bean. California from away back in the days of the *padres* has always been as famous for raising beans as Boston has been for eating them. But the castor-bean is not that kind of *frijole*. It is the bean or nut from which castor-oil is manufactured. Its cultivation was introduced into Southern California and for a time the industry paid fairly well. Somewhere along about 1870 a castor-oil factory had been started in San Francisco. The proprietors, to secure a supply of beans, furnished the farmers with seed and contracted to buy their crop at a stipulated price. The beans were planted in rows like corn and cultivated in a similar manner. The beanstalk or bush grew to be from six to eight feet high the first season. On the branches the beans were produced in spike-covered pods that were uncomfortable things to handle. The bean-grower prepared to harvest his crop by first clearing off an earthen threshing floor and tamping the soil until it was smooth and solid. The floor he surrounded by a circular canvas or board corral. With a large box fastened on a sled drawn by a horse he drove between the rows, cutting off the clusters of bean pods and throwing them into the box. The loads were dumped into the corral and spread out over the threshing floor. As the sun dried the pods the beans came out with a pop like the report of a toy pistol. This was kept up until the pods were emptied. The popping of the beans in the corral resembled a Chinese New Year celebration. It was a source of joy to the small boy, who had Fourth-of-Julys galore as long as there was any pop in the beans.

The industry held its own for several years, then the castor-bean pod joined the silk cocoon and the cotton boll in the haven of "has beens." The elements that were its undoing were similar to those that wrought the ruin of the others; scarcity and high price of labor, excessive freight rates and long distance to market.

Of all the numerous experiments tried with different agricultural products none had proved a panacea for our financial ills. Our long distance from market, and the consequent cost of transportation, made it imperative to produce some commodity to which there would be little or no local competition when transported to, and sold in an Eastern market.

For nearly three-quarters of a century oranges had been produced in Southern California, but not for exportation. The first trees were grown at San Gabriel Mission about the beginning of the last century. A few had been planted at other Missions of the South and in the gardens of some of the wealthier families. The first trees grown within the limits of the Pueblo of Los Angeles were planted in 1815. William Wolkskill, in 1841, planted the first orange grove of any extent. It was on what are now the Southern Pacific depot grounds of Los Angeles. He added to his original orchard until it covered seventy acres. In the later '60s it was reported to be paying at the rate of $1,000 per acre net. This yield was probably exaggerated but it was sufficient to induce the planting of orange groves wherever suitable land with irrigating facilities could be procured.

The extraordinary profits made from oranges by Wolkskill and a few others who had bearing orchards in the later '60s and early '70s started an epidemic of orange growing. Like the silkworm fad large profits were made from the sale of nursery stock. It was a very scrubby sort of tree that could be bought for a dollar, and a thrifty two-year-old commanded two to three dollars at the nursery.

As it took about seventy-five trees to plant an acre it required considerable ready money to embark in the business. Many prospective orange growers, too poor to buy stock, raised their own from the seed. It required two years longer to wait for returns but with them money was more valuable than time. If oranges were apples of gold the seeds in those days were golden nuggets. The visitor to a grove might be indulged in a luscious orange but at the same time he would be solicited "to save the seeds."

It took a seedling-orange tree eight or nine years to come into bearing. The problem of subsistence until he could realize on his investment was one of the most difficult that the prospective orange producer had to solve. The space between the rows of trees was sometimes planted or sown with some cereal that might help to tide over the long wait for returns, but this was objectionable because it retarded the growth of the trees.

The expense of constructing irrigating ditches and securing water rights was another large item that must be met. In the olden days of Mexican domination the waters of the rivers had been granted to the abutting *ranchos*. The illy-defined riparan rights of these grants gave rise to interminable litigation. Sometimes these contests assumed a more formidable aspect than lawsuits in a court of justice. Water wars were not uncommon. Armed men stood guard over *zanjas* (ditches) and even fought to the death in defense of what they conceived to be their rights.

The story of the orange groves of Southern California—of trees laden with the golden apples of Hesperides in midwinter—of groves white with bloom and the air filled with perfume in the land of sunshine, "when the bleak winds of March" made the dwellers in the Eastern communities "tremble and shiver"—like that other California tale of long ago, of golden nuggets picked up in river beds and cañons, appealed to the imagination and to the pockets of home-seekers.

Then the colony era began. Men imbued with the same purpose banded themselves together in Eastern communities and either came themselves or sent representatives to "spy out the land." One of the first and one of the most successful of these was the Riverside colony.

In March, 1870, Judge J. W. North, then living in Knoxville, Tennessee, sent to friends and acquaintances in the Northern States a circular entitled "A Colony for California." He outlined briefly what was expected as to the establishment and carrying out of the proposed colony. He said: "We expect to have schools, churches, lyceums, public library, reading room, etc., at a very early date and we invite such people to join our colony as will esteem it a privilege to build them." His invitation met with responses from a number of persons in different States.

In the summer of 1870, Judge North and several other gentlemen interested in the scheme visited Southern California. After examining a number of tracts of land offered them, in September, 1870, they purchased from the stockholders of the silk-culture association all the real estate (about 4,000 acres), water rights and franchises of that corporation.

The land was bought at three dollars and fifty cents per acre. It was mesa or tableland that had never been cultivated and so dry that one oldtimer asserted that he had seen "the coyotes carrying canteens when they crossed it." The outlook was not very promising. The nearest railroad point was Los Angeles, sixty-five miles distant, and from there the colonists' supplies and building materials had to be hauled on wagons.

It was easy enough to survey their land and plat a townsite, but to bring that land under cultivation and to produce from it something to support themselves was a more serious problem. Land was cheap enough and plentiful too, but water was dear and distant. It required engineering skill and a large outlay of capital to bring the two together. Without water for irrigation their lands were worthless and the colony a failure. The colonists set to work vigorously in the winter of 1870-71 to construct an irrigating canal to the colony lands from a point on the Santa Ana River, nine miles distant. Early in the summer of 1871, the canal, at a cost of $50,000 was completed to the townsite—while the ultimate purpose of the colonists was citrus-fruit culture, the weary outlook of waiting eight or nine years from the seed-planting to fruitage discouraged some of them, and they turned their attention to cultivating the raisin grape, deciduous fruits and other products that would give returns sooner.

After a series of experiments, some of them costly failures, the colonists finally evolved the "fittest" product for their soil and market and that was the Bahia orange or, as it is now called, the

Washington navel orange. In December, 1873, L. C. Tibbetts, a Riverside colonist, received by mail from a friend at Washington, D. C., two small orange trees that had been imported by the United State Agricultural Department from San Salvador de Bahia, Brazil. This variety is seedless and of fine flavor. The tree does not grow tall like the seedling and its branching from near the ground reduces greatly the cost of picking the fruit. The Bahia orange became immensely popular. Buds were taken from the parent trees as fast as they could be obtained and inserted into the seedling trees. The descendants from these two trees number up into the millions.

Tibbetts died a few years since in very straightened circumstances. He was a public benefactor. The trees he introduced have been a source of untold benefit to the people of California. Men have been immortalized as heroes and cannonized as saints for far less good to humanity, than he did. One of the original trees, now grown old and somewhat decrepit, has recently been presented to the City of Riverside. It is a living monument to the memory of Tibbetts.

The Indiana Colony followed next. The name of the settlement a few years later was changed to Pasadena. The colonists formed a corporation known as the San Gabriel Orange Grove Association, the capital stock of which was fixed at $25,000, divided into one hundred shares of $250. In December, 1873, the association purchased four thousand acres in the San Pasqual *rancho* located about nine miles east of Los Angeles. Fifteen hundred acres of the choicest land were subdivided into lots of fifteen acres each; one share was considered equivalent to fifteen acres. At the distribution of the colony lands which took place in January, 1874, in order that there might be no monopoly of the best lands by the large share-holders, the one and two share-holders were given the first choice.

Although there was not a professional horticulturist or experienced orange grower among the colonists, the colony was a success from the beginning. It was their pride and ambition to produce the finest citrus fruits in California and they succeeded. At the great citrus fair held at Los Angeles in 1881, Pasadena was awarded the first premium over all competitors for the largest and best exhibit of the kind ever made in the State. It might be added that the glory of the Pasadena groves has departed. They have been supplanted by the homes of millionaires.

During the '70s and early '80s other colonies and settlements were made—Redlands, Ontario, Fresno, Duarte, San Gabriel, Placentia, Santa Ana, and smaller settlements claimed the attention of the prospective citrus-fruit producers.

The lure that brought the colonist and the individual homeseeker to Southern California was orange growing. The profits accruing from the subdivision and sale of the great *ranchos* in small tracts aroused enthusiasm in the real estate promoter to proclaim abroad the glad tidings of great joy that awaited the colonists in this land of sunshine. "California on wheels"—railroad cars fitted up with an exhibit of the choicest and most attractive products of the State were sent forth on a pilgrimage to enlighten the people of the Far East and Middle West. At the cities and towns where the exhibit stopped, glib-tongued promoters portrayed the beauties and attractions of the Golden State in such glowing terms that the people were persuaded that Paradise had indeed been regained. Exhibits were kept up in Chicago and other large cities of the East. At the World's Fair held in New Orleans in 1885, California was awarded the sweepstakes gold medal for the best varieties of citrus fruits in the exhibit.

By the year 1885, orange growing had become the recognized industry of Southern California, and had been extended into the sheltered valleys of Central and Northern California. The great *ranchos* lying back from the sea-coast upon which water could be had for irrigation were subdivided. Where but two decades agone, on arid, sun-burned plains cattle had died by the thousands of starvation, now groves of emerald green stretched away to the horizon's tip and the bones of the dead herds were ground into fertilizers to add a more vigorous growth to the trees, and a deeper tinge to the golden fruit of the groves. It was a subject of congratulation to us that by our numerous experiments we had at last found the philosopher's stone that would transmute our baser products into gold. It was with a feeling of satisfaction that we pointed to the industry we had evolved—one that was at the same time a pleasure and a profit. But our self-complacency was to be rudely shocked by what at first appeared to be a very insignificant cause.

A few years before, Mr. T. A. Geary, a nurseryman of Los Angeles, had imported some orange trees from Australia. These were infected with the *Icerya purchasi,* or as it was commonly called, the cottony cushion scale. No attention, at the time, was paid to the parasite and no one dreamed of the baleful significance of the snowy flecks appearing here and there in the orchards and borne from tree to tree by the wind. The scale multiplied with wonderful rapidity and soon the leaves, branches and trunk of the tree affected were covered with a snowy mantle. The tender twigs died, the leaves turned a sickly yellow, the fruit shriveled and the tree was ruined.

Then it was that men realized the terrible character of the enemy that was taking possession of the land. Relentless in its march as the ruthless host of Attila—The Scourge of God—it left ruin and desolation in its path. It was not alone trees of the citrus family that were attacked but deciduous trees, vineyards, shrubbery and flowers as well. Costly experiments were tried with sprays, mixtures and emulsions, comprising every deadly poison known to chemistry and science, but no material check was put to the increase of the insect pest. Some of the experiments were effectual, they not only destroyed the *Icerya* but the tree, too. It seemed as if the citrus industry, built up with so much care and large expenditure of capital, was doomed. Orange growers who had been deriving annual incomes of five hundred to a thousand dollars an acre found themselves threatened with financial ruin—not alone their incomes, but their capital, too, suddenly swept away.

The orange groves in and around Los Angeles were the first to succumb to the cottony plague, but it was not the *Icerya* alone that wrought their final undoing. The real estate promoter lent his assistance. The cottony scale and the great real estate boom of 1887 appeared almost simultaneously in Los Angeles. At that time, stretching southward from East Third Street to the city limits and easterly from San Pedro Street to the river, covering an area of two square miles, was a succession of orange groves, the oldest in the country. These were the first smitten. Among them was the great Wolkskill grove, the pioneer orchard, planted nearly fifty years before. The trees towered up thirty to forty feet in height and some were a foot and a half in diameter. This grove was one of the show places of Los Angeles. It had been for years an unfailing source of revenue to its owner. It was the pride of the native, the lure of the tourist and an incentive to the prospective orange grower.

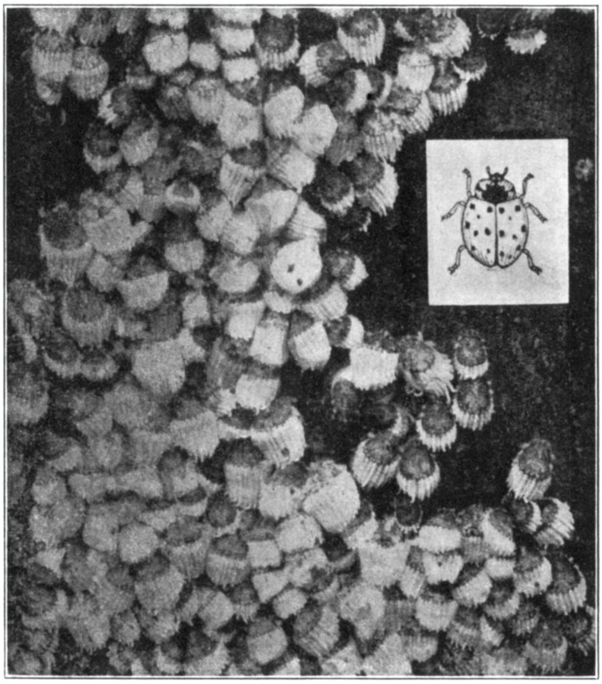
The cottony scale, insignificant in size and harmless in appearance, wrought its ruin. Its productiveness destroyed, the land was divided into city lots and the trees fell before the woodman's ax and were cut into cordwood. The other groves adjoining shared the same fate. When the boom was over and the *Icerya* dead, all that was left to Los Angeles of its living border of green and gold was its blackened stumps of trees and the little white corner stakes of the real estate promoters. The growth of the city since has covered the site of the ruined groves with dwelling houses and factories, but the *urbs in horto*—a city in a garden—once the characteristic of Los Angeles, departed with her lost groves.

But the orange industry was not dead, notwithstanding the ravages of the *Icerya* and the wail of the pessimist. The golden apples of Hesperides had not gone to join the cotton boll and the silk cocoon in the haven of "has beens." The theory that nature always provides an antidote for every poison and a remedy for every evil within her domain proved true in this case.

There must be some parasite to prey upon the *Icerya*. As it had come from Australia there would be found its Nemesis. In the spring of 1888, Mr. Albert Koebele of Los Angeles, was sent to Australia under pay and acting under instructions from the Agricultural Division of the Department of Agriculture. On arriving there he found that although at one time the white scale had been very prevalent it had almost ceased to exist. Searching for the cause, he found its extermination was due to the *Vedalia Cardinalis,* a small bug about the size of a grain of popcorn, but with the appetite of an alligator. In California it was commonly called the Australian lady-bug. He secured a small colony of these in Australia and passing over to New Zealand he found them in much greater numbers. Several colonies were sent to Los Angeles and colonized in some of the badly infested orchards. The *Vedalia* increased almost as rapidly as the *Icerya* had done. From different distributing points hundreds of colonies were sent all over the orange-growing districts. The annihilation of the *Icerya* was rapid and complete. In a very short time after the *Vedalia* began its work all that was left of the white scale was the little cottony tuft that had aided so much in distributing it throughout the orange and lemon groves. This tuft, its winding sheet, adhered to the trees long after the *Vedalia* had sepulchered its body. The winds eventually whipped away these cottony flecks and the last evidence of the baleful presence of the cottony pest disappeared. With the disappearance of the white scale the *Vedalia* disappeared. That parasite seemed to be its natural and its only food.

After the passing of the *Icerya* the reclamation of the citrus groves began. Those that had not been injured by ineffectual remedies or too long neglected were redeemed and by careful nursing made productive. The groves in Los Angeles, Pasadena and Riverside that had fallen victims to the real estate promoter were beyond redemption. Unlike the *Icerya,* the *Vedalia* could not leave his winding sheet to flutter in the breeze. The orange industry once again was placed on a paying basis and it has remained there ever since, growing in importance and extent as the years go by.

In four decades, Southern California has been transformed from a land of cattle ranges to one of orange groves. In a third of a century the citrus industry has grown from a single carload shipment to thirty-eight thousand. Of the twenty million boxes of oranges annually consumed in the United States, California supplies twelve million five hundred thousand. The receipts from the citrus crop for the season of 1908-9 were over $30,000,000.



THE ICERYA PURCHASI OR COTTONY CUSHION SCALE

THE SCOURGE OF THE ORANGE GROVES

Small picture—The Vedalia Cardinalis or Austrialian Lady Bug, (slightly enlarged.) The Nemesis of the Icerya.

Sentiment as well as profit enters into the promulgation of the citrus industry. The æsthetic millionaire can afford to toy with an orange grove, not as a source of profit but as a plaything, as a diversion, as a pleasure in creating a thing of beauty that to him will be the joy of a lifetime. The poor man who secures a few acres of wild land in the citrus belt can, by his own labor, create a source of income that will be certain and will increase as the years pass. As an imaginative writer once put it, "a man with a counterpane of a farm and six hundred orange trees can sit in the shade and draw a star preacher's salary without passing the plate."

The first carload of oranges from California was shipped to Chicago in 1877. It went via the Southern Pacific, Central and Union Pacific Railroads. The freight charges to its destination were $500. The building of the Santa Fe system and the completion of the Southern Pacific Railroad via El Paso, by increasing competition and shortening the route, have reduced freight rates. Refrigeration, icing and precooling of fruit cars have greatly reduced the loss from decay in transit.

But in all the decades that have passed since that first carload of oranges was shipped out of California, the problem of transportation has been the burning question of the industry. The contention between producer and carrier has gone on through all the years, and is today as vital an issue as it was thirty years ago.

No other industry has so many intelligent and progressive men enlisted in it. The California Fruit Growers' Exchange, an organization composed of a majority of all the fruit growers in the citrus belt, regulates the shipping and marketing of the annual crop so as to avoid ruinous competition, and divides the proceeds of the sales on an equitable basis both to the small producer and the large. It is one of the most complete and best-managed corporations in existence for the disposing of agricultural products.

In the "Back-to-the-Soil" movement now in progress throughout the United States, no other agricultural vocation is so alluring as orange growing. This is evident from the increased immigration to Florida and the citrus districts of California; and from the high prices paid for orange groves. In Southern California the price of a Washington navel or Valencia orange grove in full bearing, ranges from $1,500 to $2,000 per acre. A twenty-acre orange orchard is as much as one man can cultivate. The immigrant coming from the Middle West, the country of cheap lands and big farms, stands aghast at the prices asked for orange groves. He hesitates, questions, doubts, fears, but the lure of the golden apples is too strong to resist, he invests and his quondam farm of two hundred acres in the land of blizzards shrivels to one of twenty acres in the land of sunshine.